



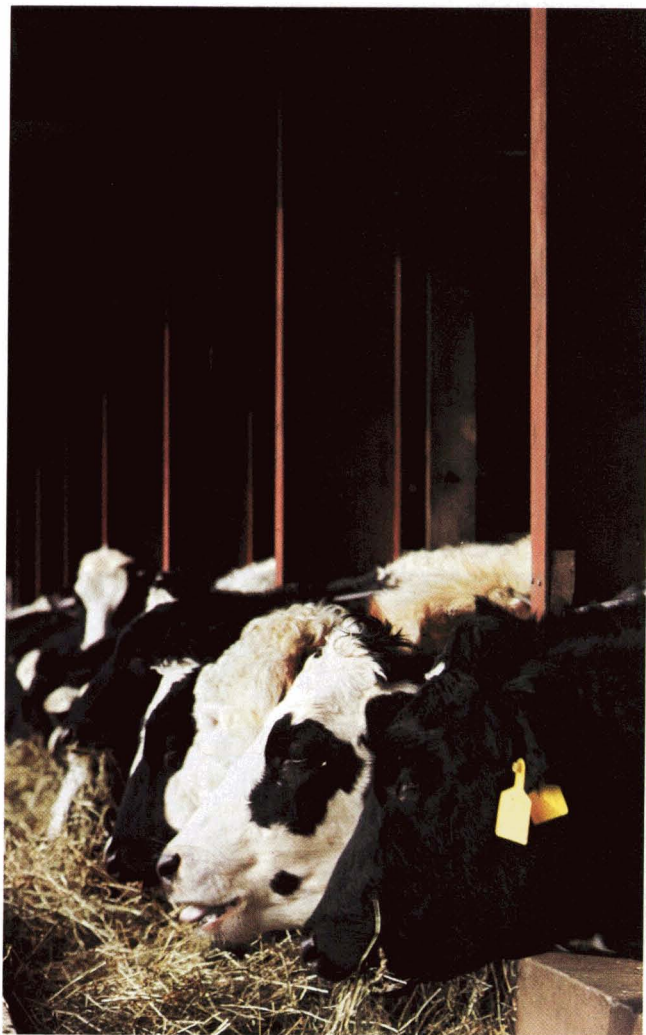
MULTIPURPOSE COMPOUND

Caused by bacteria, bovine mastitis is an inflammation of a cow's mammary gland that results in loss of milk production and, in extreme cases, death. According to the National Mastitis Council, it is the largest cause of financial loss for the U.S. dairy industry, amounting to about \$2 billion annually. The University of Massachusetts Department of Animal Sciences, Amherst, Massachusetts is conducting a year-long test of products that might be the answer to effective treatment and prevention of the disease, specially-formulated derivatives of an unusual basic compound known as Alcide™. Manufactured by Alcide Corporation, Westport, Connecticut, the Alcide compound has killed all tested bacteria, virus and fungi shortly after contact, with minimal toxic effect on humans or animals.

The research effort at the University of Massachusetts' farm involves test of a teat dip version of the Alcide compound as a prevention measure, and intramammary infusions of a related solution designed to treat mastitis. In the upper photo is the farm's milking barn where cows being treated first undergo udder cleansing, then milking and finally teat-dipping in the Alcide preparation (opposite page, top). At right below, a graduate student researcher is taking a milk sample from a cow undergoing treatment. The Massachusetts tests have shown Alcide's teat dip to be effective against a wide range of mastitis-causing organisms; the product has also demonstrated that it is non-toxic and does not irritate the udder.

Alcide Corporation credits the existence of the mastitis treatment/prevention products to assistance provided the company by the New England Research Application Center (NERAC), one of NASA's nine Industrial Application Centers, which provide information retrieval services and technical help to industry and government clients. The story of Alcide Corporation's genesis and product line development is an example of the type of assistance centers like NERAC can provide.

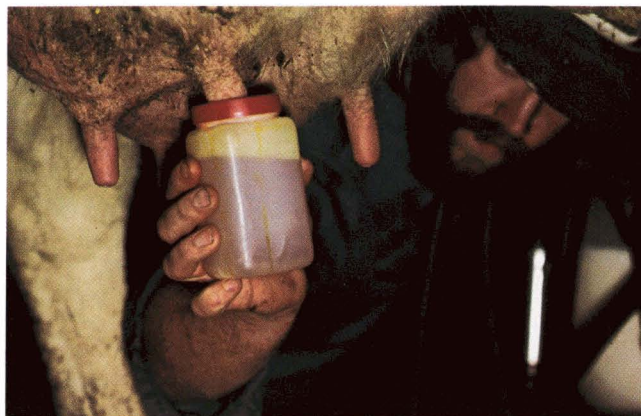
The exceptional properties of the Alcide compound



were discovered by Howard Alliger of Heat Systems-Ultrasonics, Plainview, New York. It was originally developed as a fast-acting liquid sterilizer for disinfecting ultrasonic cleaning tanks. On a day in 1978 when he was bothered by a skin irritation on his hands, Alliger nonetheless proceeded with a tank disinfecting job, saturating his hands with Alcide compound. By day's end, he discovered the skin irritation had disappeared. Recognizing the potential of a compound that apparently had uses far beyond tank sterilization, Alliger performed initial experiments to test its efficacy against bacteria, virus and fungi. Results were sufficiently promising that Alliger teamed with fellow inventor Elliott J. Siff to develop, market and license the compound; they are, respectively, chairman and president of the company.

Ready to market certain of their products, Alcide Company requested NERAC's assistance in identifying possible applications and the types of businesses that might use it. NERAC conducted a computer search of more than a dozen data bases and uncovered scores of applications, among them treatment of viral, fungal and bacterial infections in animals; treatment of a variety of human skin diseases; disinfection and sterilization in medical facilities; as a sterilant for food production machinery and food preservation; as a preservative for cutting oils and paints; and as a deodorant/disinfectant for carpets, chemical toilets, public conveyances and meeting places.

Alcide Company developed experimental compounds for some of these applications and three disinfection products have already reached the commercial market. One, called ABQ™ is used to maintain germ-free conditions in animal breeding quarters. Another—



Incyte™—is a mild non-toxic product used in the plant tissue culture field for disinfection of plant parts prior to culturing. The latest product, called LD™, is a disinfectant for research laboratories that kills all tested microorganisms on any laboratory surface.

The company is now engaged in research and development of potential treatments—all based on the Alcide compound—for herpes, acne and other human viral/fungal skin afflictions. Animal tests of the herpes treatment were sufficiently promising to open the way for human clinical trials, now being initiated in Europe. Acne clinics have begun in the U.S. at Yale Medical School. In other research and development activities, the company is exploring products containing the Alcide compound for use in extending the shelf life of fresh fish and poultry.

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